

### **REMARKS**

The Applicants sincerely appreciate the thorough examination of the present application as evidenced by the Final Office Action of September 17, 2009 (the Final Action). By this Amendment, the Applicants have: amended Claim 1 to include all recitations of Claims 2, 3, 52, and 58 and to provide clarification thereof; canceled Claims 2, 3, 52, and 58; amended dependent Claims 4 and 8-11 to provide consistency with Claim 1; and amended Claim 59 to depend from Claim 1. Similarly, the Applicants have amended Claim 23 to include all recitations of Claims 24, 25, 54, and 60 and to provide clarification thereof; canceled Claims 24, 25, 54, and 60; amended dependent Claims 26, 30-33 to provide consistency with Claim 23; and amended Claim 61 to depend from Claim 23.

In the following remarks, the Applicants will show that all claims are patentable. Accordingly, a Notice of Allowance is respectfully requested in due course.

#### **All Objections Under 35 U.S.C. Sec. 101 Have Been Overcome**

Claim 45 has been rejected under 35 U.S.C. Sec. 101. By this amendment, the Applicants have canceled Claims 45, 48, and 50-51 to reduce issues for further consideration. The Applicants note, however, that these claims have been canceled without prejudice to the Applicants' right to pursue the subject matter of these claims in one or more divisional and/or continuing applications.

#### **Claim 1 Is Patentable**

As noted above, Claim 1 has been amended to include all recitations of dependent Claims 2, 3, 52, and 58, and the claims have been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over different combinations of: U.S. Publication No. 2002/0105965 to Dravida et al. (Dravida); U.S. Patent No. 5,708,963 to Mobley et al. (Mobley); U.S. Patent No. 6,574,195 to Roberts (Roberts); U.S. Pub. No. 2002/0003803 to Kametani (Kametani); U.S. Pat. No. 6,795,443 to Jeong (Jeong); U.S. Pat. No. 6,981,029 to Menditto (Menditto); U.S. Pub. No. 2002/0136224 to Motley (Motley); and U.S. Pub. No. 2004/0085969 to Chen (Chen). In particular, Claim 1 was rejected under 35 U.S.C. Sec. 103(b) as being

unpatentable over Dravida, Mobley, and Roberts; Claims 2 and 52 were rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Dravida, Mobley, Roberts, Kamentani, and Jeong; and Claims 3 and 58 were rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Dravida, Mobley, Roberts, Kamentani, Menditto, and Motley. The Applicants respectfully, submit, however, that amended Claim 1 is patentable for at least the reasons discussed below.

As amended, Claim 1 recites a method of operating a data network between a routing gateway for a subscriber and an application data service provider providing an application data service wherein:

the routing gateway is at a customer premises remote from the data network, wherein the application data service provider is located remote from the data network, and wherein the routing gateway is coupled to the data network via a digital subscriber line, the method comprising:

receiving at the data network from the application data service provider an identification of the routing gateway comprising a digital subscriber line identification of the routing gateway, an identification of the application data service provider, and data flow characteristics of the application data service for a session of the routing gateway using the application data service provided by the application data service provider wherein the application data service provider is remote from the data network, and wherein the data flow characteristics of the application data service include a bandwidth characterization for the application data service and a priority characterization for the application data service both received from the application data service provider;

responsive to receiving at the data network the identification of the routing gateway, the identification of the application data service provider, and the data flow characteristics for the application data service, saving the data flow characteristics of the application data service for the routing gateway including the bandwidth characterization and the priority characterization at the data network;

forwarding the data flow characteristics of the application data service from the data network to the routing gateway at the customer premises remote from the data network, wherein forwarding the data flow characteristics to the routing gateway includes forwarding the bandwidth characterization and the priority characterization over the digital subscriber line to the routing gateway at the customer premises remote from the data network;

providing an interconnection between the routing gateway and the application data service provider through the data network and the digital subscriber in accordance with the data flow characteristics to thereby support a session of the routing gateway using the application data service provided by the application data service provider;

after providing the interconnection and completing the session, deleting the data flow characteristics including the bandwidth characterization and the priority characterization saved at the data network for the session of the routing gateway using the application data service provided by the application data service provider; and  
after providing the interconnection and completing the session, terminating the interconnection between the routing gateway and the application data service provider to thereby terminate the session of the routing gateway using the application data service provided by the application data service provider;  
wherein the application data service comprises gaming, video on demand, and/or access to a virtual private network.

The Applicants submit that amended Claim 1 is patentable for at least the reasons presented in the Request for Reconsideration that was filed on June 16, 2009 (hereinafter the "Request"). While all remarks from the Request are not restated herein for the sake of conciseness, all remarks from the Request are incorporated herein.

Regarding rejections based on Dravida, Mobley, and Robert relating to elements of Claim 1 that were previously presented in Claim 1, the Final Action has improperly combined elements of Dravida's coax cable distribution facilities with elements of Mobley's satellite direct-to-home (DTH) subscription satellite television system (*see*, Mobley, col. 12, lines 12-14) and with elements of Robert's computer network (*see*, Robert, col. 1, line 8). Moreover, even if elements of the unrelated systems of Dravida, Mobley, and Roberts were somehow combined, the resulting combination would fail to teach or suggest the method of Claim 1.

In particular, Dravida fails to teach or suggest a data service provider as recited in Claim 1 and/or data flow characteristics received from a data service provider as recited in Claim 1. In addition, the Final Action concedes that:

Dravida et al. do not disclose ... receiving at the data network from the data service provider an identification of the routing gateway, an identification of the data service provider, data flow characteristics of the data service for a session of the routing gateway using the data service provided by the data service provider....

Final Action, page 7. Moreover, Dravida fails to teach or suggest receiving data flow characteristics of a data service for a session of a routing gateway from the data service provider; saving data flow characteristics (received from the data service provider) at the data network; or forwarding data flow characteristics (received from the data service provider) to the routing gateway. While Dravida discusses the NIU periodically receiving flow control

flags from the SAS device (*see*, Dravida, paragraph [0261], page 18), even if flow control flags are interpreted as data flow control characteristics, Dravida's flow control flags are received from a subscriber access switch and not from an application data service provider remote from a data network.

In an attempt to provide some of these deficiencies of Dravida, the Final Action states that:

Mobley et al disclose a satellite communications system for storing data at a subscriber terminal and responsive to a poll transmitting the store data with the following features ... receiving at the data network from the data service provider an identification of the routing gateway, an identification of the data service provider (Fig. 7B, shows a typical response data packet for either bent pipe or store and forward delivery to a gateway and from the gateway to a subscription delivery, see "the packet includes gateway identifier and service provider identifier" recited in column 15, lines 49-52)....

It would have been obvious ... to modify the system of Dravida et al. by using the features, as taught by Mobley et al., in order to provide receiving at the data network from the data service provider an identification of the routing gateway, an identification of the data service provider. The motivation of using these functions to enhance the system in a cost effective manner. (Underline added.)

Final Action, pages 8-9. The "data packet response to a polling request" shown in Figure 7B of Mobley does not provide the disclosure alleged by the Final Action. As shown in Figures 5A and 5B of Mobley, a "RESPONSE TO POLL" is transmitted by a subscriber terminal 2/102 to a satellite 3/103 and then to a base station 4/104. *See*, Mobley, Figures 5A and 5B, and col. 16, lines 27-28. Accordingly, the data packet response to a polling request shown in Figure 7B of Mobley is received from a subscriber terminal (as opposed to being received from a data service provider), and Mobley's data packet response thus teaches the opposite of receiving identifications (of a routing gateway and a data service provider) from a data service provider. Accordingly, even if Mobley's response to polling requests (transmitted by a subscriber terminal to a base station and then to a base station) were somehow added to Dravida's coax facility, the result would be the opposite of data flow characteristics that are forwarded to a routing gateway at a customer premises as recited in Claim 1. The Applicants thus submit that Mobley fails to provide the disclosure alleged by the Final Action and that Mobley actually teaches away from the recitations of Claim 1.

In addition, the Applicants submit that the selective substitution of Mobley's data packet response to a polling request (transmitted from a subscriber terminal in a direct-to-home satellite television system) into Dravida's coax cable distribution facilities would result in inoperability of Mobley's response to the polling request and/or inoperability of Dravida's coax cable distribution facilities. More particularly, there is no reasonable expectation that either Mobley and/or Dravida would perform according to its intended function if such a selective substitution were made because the "POLLS" and "RESPONSE TO POLL" of Mobley appear to be specific to needs of its satellite system using low earth orbiting satellites and because Dravida does not appear to have any such needs. Accordingly, the Applicants submit that it would not be obvious to combine Dravida and Mobley as alleged in the Final Action, and that even if combined, the resulting combination would fail to provide the disclosure alleged by the Final Action.

While Mobley does state that its invention may be utilized in a cable or fiber optical system, Mobley states that this use would be where "telephone, cable or other known return path communications are unlikely." Mobley, col. 10, lines 8-14. In other words, Mobley's low earth orbiting (LEO) satellite may provide a return path for narrow band information (*see*, Mobley, col. 1, lines 8-12) in a cable or fiber system where other known return path communications are unlikely (*see*, Mobley, col. 10, lines 11-15). Accordingly, the Applicants maintain that Mobley's Response to Poll over a satellite return path is the opposite of forwarding data flow characteristics to a routing gateway at a user premises, and that Mobley's LEO system would not perform according to its intended function if somehow modified to reverse the Response to Poll.

The Final Action further concedes that the combination of Dravida and Mobley does not disclose:

data flow characteristics of the data service for a session of the routing gateway using the data service provided by the data service provider wherein the data service provider is remote from the data network....

Roberts discloses a communication system for quality of service (QoS) management transmitted over computer system with the following features ... data flow characteristics of the data service for a session of the routing gateway using the data service provided by the data service provider wherein the data service provider is remote from the data network (Fig. 6, illustrates a high level flow diagram for

identifying a flow block corresponding to a received data packet, see "the received data packet is formatted to a micro-flow data packet which includes a QoS field 310" recited in column 15 lines 10-30)....

It would have been obvious ... to modify the system of Dravida et al. with Mobley et al. by using the features of Roberts, in order to provide data flow characteristics of the data service for a session of the routing gateway using the data service provided by the data service provider wherein the data service provider is remote from the data network. The motivation of using these functions is to enhance the system in a cost effective manner.

Final Action, pages 9-11.

Cited portions of Roberts state that "if the received data packet already is formatted as a micro-flow data packet, the data packet would include a label field 305 and a QoS field 310." Roberts, col. 15, lines 9-12. Roberts, however, fails to teach or suggest receiving data flow characteristics of a data service for a session from a data service provider remote from the data network. In contrast, Roberts states that a micro-flow classifier 530 (shown in Figure 5 as an element of linecard 410 of switch 220 shown in Figure 4 of network 200 shown in Figure 2) utilizes "extracted layer information to determine 710 QoS descriptor values that are to be associated with the flow block corresponding to the received data packet." Roberts, col. 13, lines 8-12 (underline added). Accordingly, the QoS descriptor values of Roberts are determined by micro-flow classifier 530 (which is an element of network 200), so that Roberts fails to teach or suggest receiving data flow characteristics of a data service for a session from a data service provider remote from the data network. Assuming only for the sake of argument that Roberts does disclose receiving data flow characteristics from a data service provider remote from the data network, Roberts also fails to disclose or suggest forwarding such data flow characteristics (received from a remote data service provider) to a routing gateway at a customer premises remote from the data network (which teaching is also missing from Dravida and Mobley as discussed above).

The Applicants thus maintain that (among other elements of Claim 1) Dravida and Mobley fail to disclose or suggest forwarding data flow characteristics to a routing gateway (over a digital subscriber line) at a customer premises, and that Roberts fails to provide this missing teaching. In further support for this combination of references, the Final Action states that:

Dravida teaches the claimed limitations "forwarding the data flow characteristics of the data service from the data network to the routing gateway at the customer premises remote from the data network recited in paragraph 0308 lines 1-12.)

Final Action, page 37. The cited portions of Dravida, however, fails to provide the disclosure alleged in the Final Action. In particular, the cited portion of Dravida states that:

Typically, most applications requiring a high QoS such as guaranteed throughput at a certain level and some limit on packet delays involve signaling between the end-user application and a call agent 140 (FIG. 3) in the service provider network. For instance, a voice over IP (VoIP) call involves signaling between the end-user application or a residential gateway that resides on the customer premises and call server (i.e. a call agent) in the service provider network using SIP, or H.323 or some similar protocol. It is the responsibility of the call agent to ensure that the system has adequate resources to provide the required QoS to the connection being set up.

Roberts, paragraph [0308], page 22, underline added. While Dravida discusses a call agent ensuring that the system has adequate resources to provide a required QoS of a connection being set up, Dravida fails to disclose or suggest forwarding data flow characteristics to a routing gateway at a customer premises (much less forwarding data flow characteristics over a digital subscriber line).

For at least the reasons discussed above, the Applicants respectfully submit that the combination of Dravida, Mobley, and Roberts fails to teach or suggest multiple elements of the method of Claim 1 as previously presented. More particularly, none of the cited references (taken alone or in combination) teaches or suggests the following elements that were included in Claim 1 as previously presented:

- 1) receiving data flow characteristics of a data service for a session of a routing gateway from the data service provider; or
- 2) saving data flow characteristics (received from the data service provider) at the data network; or
- 3) forwarding data flow characteristics (received from the data service provider) to the routing gateway.

In addition, the Applicants further submit that additional elements from previously presented Claims 2, 3, 52, and 58 provide separate basis for patentability, as discussed below.

Regarding recitations of Claims 2 and 52 (that are now included in Claim 1), the Final Action further cites Kamentani and Jeong in combination with Dravida, Mobley, and Roberts

that are discussed above. *See*, Final Action, page 15. Regarding recitations of Claims 2 and 52, however, the Final Action only cites Jeong. Regarding Claim 52, for example, the Final Action states that:

the routing gateway is coupled to the data network via a digital subscriber line and wherein the identification of the routing gateway comprises a digital subscriber line identification (Fig. 1, network architecture for establishing IP connectivity, see "network comprises a source terminal A10, a target terminal B70 and a digital subscriber line" recited in column 4 lines 36-40)....

It would have been obvious ... to modify the system of Dravida et al with Mobley et al., Roberts and Kametani by using the features, as taught by, Jeong et al. in order to provide wherein the routing gateway is coupled to the data network via a digital subscriber line....

Final Action, page 18. The Applicants respectfully submit, however, that there is no motivation to somehow selectively substitute Jeong's digital subscriber line into a system of elements cobbled together from Dravida's coax cable distribution facility, Mobley's low earth orbiting satellite return path for narrow band information, Roberts' computer networks, and Kametani's network systems. Moreover, even if such a substitution were somehow made, there is no disclosure or suggestion in any of the cited references to forward bandwidth and priority characterizations over such a digital subscriber line to a routing gateway at a customer premises, and the Final Action makes no assertion that this combination of references provides such a disclosure or suggestion.

Regarding recitations of Claims 3 and 58 (that are now included in Claim 1), the Final Action further cites Kametani, Menditto, and Motley in combination with Dravida, Mobley, and Roberts that are discussed above. *See*, Final Action, page 19. Regarding recitations of Claims 3, for example, the Final Action concedes that Dravida, Mobley, Roberts, Kametani, and Menditto do not disclose "wherein forwarding the data flow characteristic to the routing gateway includes forwarding the bandwidth characterization and the priority characterization to the routing gateway at the customer premises remote from the data network...." Final Action, page 29. Regarding these recitations, the Final Action states that Motley discloses:

forwarding the bandwidth characterization and the priority characterization to the routing gateway at the customer premises remote from the data network (Fig. 9, illustrating the packeting information for a frame relay message block during voice data transmission, see "priorities and bandwidth parameters are transmitted" recited in

paragraph 0058 lines 1-6)....

Final Action, page 30. While Motley, states that "When priorities or bandwidth limitations exist, a subset of these parameters are transmitted" (Motley, paragraph [0058], page 4), Motley fails to disclose or suggest that any such parameters are transmitted to a routing gateway at a customer premises, or that any such parameters are transmitted over a digital subscriber line. In contrast, Motley states that: "The quality flags are not sent to the receiving end, but are used in network manager 61 (illustrated in Figure 3a) to reduce bandwidth with minimal impact on speech quality." Motley, paragraph [0057], page 4, underline added. Accordingly, Motley teaches away from the recitations of Claims 3 and 58 that are now included in Claim 1.

As noted above, Claim 1 has been amended to include all recitations of Claim 3 and 58 which were rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Dravida, Mobley, Roberts, Kamentani, Menditto, and Motley. This cobbling together of various elements from six disparate references relating to coax cable distribution facilities (Dravida, paragraph [0088]), low earth orbit satellite systems (Mobley, col. 1, lines 8-10, and col. 15, line 50), computer networks (Roberts, col. 1, line 8), network systems (Kametani, paragraph [0001], page 1), Internet information retrieval processing (Menditto, col. 1, lines 7-10), and telecommunication data compression (Motley, title) appears to be based on improper hindsight in light of the Applicants' disclosure. These references appear to be the result of "keyword" searches seeking to find various recited elements of the Applicants' claims. The Final Action thus appears to be engaged in a hypothetical re-design of Dravida's coax cable distribution facilities in an attempt to reconstruct dependent Claim 58 (the recitations of which are now included in Claim 1) using the Applicants' claims as a roadmap. However, in doing so, the Final Action has engaged in exactly the kind of impermissible hindsight that was condemned by the U.S. Supreme Court in *KSR International Co. v. Teleflex Inc., et al.*, 550 U.S. 1 (2007).

For at least the reasons discussed above, the Applicants respectfully submit that Claim 1 is patentable over the cited art. In addition, the Applicants submit that dependent Claims 4-11 and 59 are patentable at least as per the patentability of Claim 1 from which they depend.

**Claim 23 Is Patentable**

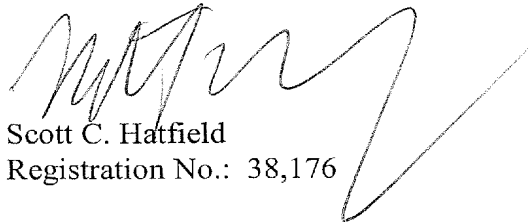
Claim 23 has been amended to include all recitations of dependent Claims 24, 25, 54, and 60 and to provide clarification thereof. Moreover, Claims 23, 24, 25, 54, and 60 were rejected in the Final Action using the same rationale and references used to reject Claims 1, 2, 3, 52, and 58. The Applicants respectfully submit that Claim 23 is patentable for reasons similar to those discussed above with respect to Claim 1. Accordingly, separate arguments relating to the patentability of Claim 23 are omitted for the sake of conciseness. Moreover, dependent Claims 26-33 and 61 are patentable at least as per the patentability of Claim 23 from which they depend.

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Filed: November 25, 2003  
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### CONCLUSION

Accordingly, the Applicants submit that all pending claims in the present application are in condition for allowance, and a Notice of Allowance is respectfully requested in due course. The Examiner is encouraged to contact the undersigned attorney by telephone should any additional issues need to be addressed.

Respectfully submitted,

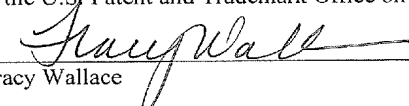


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